

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number  
**WO 2004/047297 A1**

(51) International Patent Classification<sup>7</sup>: **H03K 19/0185**

(21) International Application Number:  
PCT/IB2003/005177

(22) International Filing Date:  
15 November 2003 (15.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/427,422 18 November 2002 (18.11.2002) US  
60/499,197 27 August 2003 (27.08.2003) US

(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DE LANGEN**, Klaas-Jan [NL/US]; 1109 McKay Drive, M/S-41SJ, San Jose, CA 95131 (US). **SINGH**, Balwinder [US/US]; 1109 McKay Drive, M/S-41SJ, San Jose, CA 95131 (US). **TOY**, Edmond [US/US]; 1109 McKay Drive, M/S-41SJ, San Jose, CA 95131 (US).

(74) Common Representative: **KONINKLIJKE PHILIPS ELECTRONICS N.V.**; c/o LESTER, Shannon, 1109 McKay Drive, M/S-41SJ, San Jose, CA 95131 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

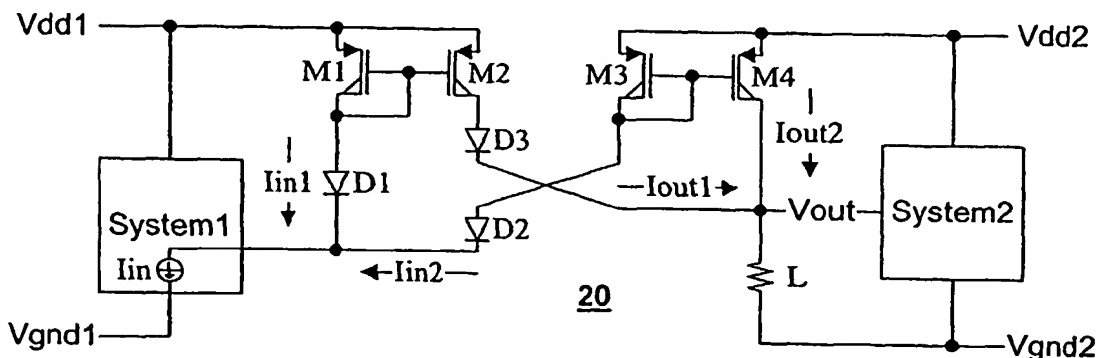
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE,

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(54) Title: **LEVEL SHIFTING CIRCUIT BETWEEN ISOLATED SYSTEMS**



(57) Abstract: A level shifting circuit (20, 30) couples an input current ( $I_{in}$ ) from one system to another, isolated, system, by driving a single load ( $L$ ) via one or more current mirrors of a common type. In a first embodiment (20), two similar type (either N-type or P-type) current mirrors ( $M1, M2; M3, M4$ ) provide output current ( $I_{out1}, I_{out2}$ ) to a common load. Diodes ( $D1, D2$ ) are used to split the input current ( $I_{in1}, I_{in2}$ ) between the two current mirrors during normal, non-faulty conditions, and to turn off either one of the two current mirrors during a fault condition to permit proper operation in the presence of a fault. In a second embodiment (30), a single current mirror ( $M1, M2$ ) mirrors the input current ( $I_{in}$ ) to the output load ( $L$ ), and a pair of diodes ( $D1, D2$ ) selects which of the isolated systems to use as the power source in the event of a fault.